Sociocultural Variables in the Diagnosis Of Schizophrenia Among Inpatients

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SOCIOCULTURAL VARIABLES IN THE DIAGNOSIS OF SCHIZOPHRENIA AMONG INPATIENTS.

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ABSTRACT:

SOCIOCULTURAL VARIABLES IN THE DIAGNOSIS OF SCHIZOPHRENIA AMONG INPATIENTS. **Ngozi Babette Okezie and Stanley Jackson M.D. Department of Psychiatry, Yale University School of Medicine, New Haven, Conn.**

Social class as measured indirectly by place of hospitalization, public or private psychiatric hospital, is statistically significant in determining underestimation of schizophrenia on admission. It was clearly demonstrated in this study of 155 inpatients at a selected university affiliated public and private hospital that private psychiatrists were more reluctant to give an admission diagnosis of schizophrenia to newly diagnosed patients as compared to public psychiatrists (47% vs. 84% of patients respectively were diagnosed with schizophrenia on admission, $p<.025$). All the patients included in this study were inpatients at either hospital between 1980 and 1989 and received a discharge diagnosis of schizophrenia. There was no statistically significant relationship between the admission diagnosis and race, sex, age, education or number of previous diagnoses at either hospital. This study also clearly demonstrated the importance of a previous diagnosis of schizophrenia in determining an admission diagnosis of schizophrenia. There was no difference between the private and public hospital in terms of rates of admission diagnosis of schizophrenia among those with a previous diagnosis of schizophrenia (81% vs. 84% respectively, $p<.025$).

The implication of this study is that private psychiatrists underestimate the diagnosis of schizophrenia on admission because of the treatment implications as well as the prognosis of schizophrenia. This may be important in evaluating studies which look at rates of treated schizophrenia by social class.

INTRODUCTION:

The purpose of this study is to investigate the relationship between social class and the diagnosis of schizophrenia among inpatients who received a discharge diagnosis of schizophrenia in a selected public and a selected private hospital. The diagnostic process will be evaluated by comparing the admission diagnosis with a final discharge diagnosis of schizophrenia among these patients in order to detect discrepancies. The process by which inpatients are rendered a discharge diagnosis of schizophrenia has not previously been investigated with regards to social class. The relationship between the diagnostic process and social class is critical to understanding which sociocultural factors play a role in diagnosis.

This complex relationship between social class and mental illness has been discussed in the literature for many years (Dohrenwend & Dohrenwend, 1969; Srole et al., 1962; Jaco, 1960; Myers & Roberts, 1958; Hollingshead and Redlich, 1958; Hyde et al., 1944; Malzberg, 1940; Faris and Dunham, 1939). Previous studies have suggested an inverse relationship between social class and mental illness with increasing rates of mental illness as one descends the socioeconomic ladder. Ecological explanations have been provided such as nutritional deficiences due to poverty, social and economic stress (Brenner,1973; Hollingshead and

Redlich,1958), cultural isolation (Faris and Dunham,1939), and family disorganization (Faris and Dunham ,1939; Hollingshead and Redlich,1958; Myers and Roberts,1958). Heredity has been proposed to explain these class differences,suggesting a predetermined vulnerability to mental illness among those of the lowest classes. However, no clear etiology or unequivocal explanation has yet been provided to explain these class differences in rates of mental illness.

It is difficult to design a study to objectively look at the relationship between mental illness and social class. Difficulties arise because of problems of case finding (treated versus untreated cases of mental illness) and issues of construct validity and reliability (Dohrenwend & Dohrenwend, 1969).These difficulties may lead to skewed patient population (not representative of all cases) and may result in false conclusions.

Construct validity becomes an issue in diagnosis because the instruments that measure psychopathology, i.e. diagnostic criteria,are imprecise. Diagnostic criteria are structured to provide good inter-rater reliability among different practitioners. Structured diagnostic criteria do not however guarantee that these criteria have meaning in different cultural settings (Kleinman,1988).

This study attempts to look at the diagnostic process involved in diagnosing patients with schizophrenia in a public and a private psychiatric hospital. Which

sociocultural variables have an impact on the ways that patients are diagnosed with schizophrenia on admission who ultimately receive a discharge diagnosis of schizophrenia? Although the relationship between social class and mental illness has been investigated in the past (over 20 years ago), it is important to return to this question because there have been many improvements in the diagnostic criteria with the advent of DSM-III/R which have made diagnoses more reliable in the past decade. This study will use a homogenous group of patients defined by a discharge diagnosis of schizophrenia at either hospital to determine if different patterns of admission diagnosis exist between the public and private hospital.

The hypothesis of this study is that social class as measured indirectly by place of hospitalization is very important in determining whether a patient will receive an admission diagnosis of schizophrenia. Social class may operate to render an admission diagnosis of schizophrenia more rapidly among patients in a public psychiatric hospital when compared to private patients. This difference in the way patients are diagnosed in a public and private hospital may explain the class differences in rates of treated mental illness among the lower classes that has been previously reported (Dohrenwend & Dohrenwend, 1969; Srole et al, 1962; Jaco, 1960; Myers & Roberts, 1958; Hollingshead and Redlich, 1958; Hyde et al., 1944; Malzberg, 1940; Faris and Dunham, 1939).

It is essential to look at the diagnostic process, the admission diagnosis as well as discharge diagnosis in order to detect potential bias in the way patients are diagnosed for schizophrenia. If diagnostic bias (intentional or unintentional) enters into the diagnostic process this may create an artifact when analzying study data from treated cases resulting in falsely elevated rates of psychopathology among certain groups. Srole et al.(1962) attempted to guard against social class related bias in assigning a diagnosis to the study participants by blinding the reviewing psychiatrists to the social status of the cases.

Perhaps before the discussion proceeds any further it would be prudent to review some of the studies that have examined the relationship between social class and schizophrenia as well as some of the literature on diagnostic criteria and construct validity for schizophrenia.

Although the operational definition for schizophrenia has varied over the century it is still useful to review the previous studies that looked at the relationship between this disorder and social class.

Faris and Dunham (1939) investigated the relationship between social factors and mental disorders in Chicago in 1930-31. They looked at first admissions rates at the county hospital, the total number of cases was 7,069, and compared admission rates by community of origin within the city. They concluded that among schizophrenics there were high rates of schizophrenia in communities of extreme social

disorganization, primarily near the center of the city. Because of their concern that not all psychotic patients were state hospitals patients and that this might encourage the selection of the poorer classes in the population they attempted to compare the distribution of private hospitals cases with those from the state hospitals. Two interesting points were noted with regards to the comparison with private hospitals, the first being that public or state hospitals received 82.5% of the first admissions while the private hospitals only received 17.5% of the cases and secondly that private hospitals had a propensity to classify patients as "without psychoses" suggesting that either public hospitals were less likely to admit patients with mild personality disorders or patients were more likely to be diagnosed as "without psychoses" in the private hospitals.

Faris and Dunham hypothesized that these high rates of schizophrenia could be explained on the basis of the extended isolation and social disorganization that these patients experienced in their lower class environment which resulted in their abnormal behavior. They also proposed a 'drift hypothesis'to explain this relationship. The 'drift hypothesis' suggested that mental illness prevented people from functioning and sustaining an economic base and they therefore drifted down the social class structure to the lower class.

Some of the criticisms directed at Faris and Dunham's study are addressed in a chapter by Dunham in Myers et al.

(1986). Dunham acknowledges the problem of selection bias in only studying treated cases, in this instance first admissions to public and private hospitals. He suggests that treated cases only represent 50% or 60% of all persons with mental illness and the rest go uncounted. The importance of construct validity and reliability in diagnosis of functional psychosis in study results is also highlighted.

Hollingshead and Redlich's (1958) study attempted to clarify the relationship between social class and mental illness. Their study suggested that inadequate treatment, treatment late in the course of mental illness and poorly integrated families may explain the greater number of chronic patients among the lowest classes.

Hollingshead and Redlich included all patients known to be in some form of psychiatric treatment (both public and private inpatient as well as outpatient) in a six month period in 1950 in the Greater New Haven area. They devised social class categories based on occupation, education and place of residence. Using these social class categories I-V, they compared social class with the rates of mental illness as well as the modes of treatment the patients received and social mobility.

Unlike the proposed 'drift hypothesis' of Faris and Dunham, Hollingshead and Redlich's patients did not drift downward in social class secondary to their mental illness. They remained in the same social class as their class of origin and parental socioeconomic status (SES). However when

patients from different social classes received the same diagnosis it was shown that they received different modes of treatment. Patients in the higher social classes received more individual psychotherapy while patients in the lower classes received more organic treatments. This can partially be explained by the fact most of the patients from the lower classes received their psychiatric care from state hosphitals where custodial care was the norm while the patients from the higher classes mostly received their care from private psychiatrists or private hospitals with more time for psychotherapy.

Some of the criticism directed at Hollingshead and Redlich's study are acknowledged in a chapter by Hollingshead in Myers at al. (1986). The issue of selection bias in the study is addressed as a problem of case finding(only treated cases are studied and yet many factors determine who and why people enter treatment). Selection bias often occurs in studies that are not community wide surveys of mental illness, Myers et al.(1986). Other criticisms have been directed at the failure of the study to adequately show that social class is inversely related to rates of mental illness. In Hollingshead and Redlich's study the rates of mental illness are comparable for classes I-III but only vary substantially between these classes and classes IV and V (Srole et al.,1962). It has been suggested that the chronicity of the cases may have contributed to the higher rates among the lower classes. The lower classes are less

likely to be discharged back into the community and have longer stays resulting in a "pileup" of cases(Srole et al., 1962).

The study of Midtown Manhattan by Srole et al.(1962) provides an interesting community survey of 1,660 people surveyed for rates of undetected mental illness as well as comparison with a treatment census of known psychiatric patients by social class. It does not present data on specific psychiatric diagnoses and their relation to social class. They constructed six categories of mental functioning from well to impaired. The assignments to one of these categories was made by three reviewing psychiatrists who had never interviewed the study participant but had a standardized questionnaire report from trained field workers. This study highlighted some important issues; such as surveying untreated people with disease in order to better ascertain prevalence, attempts to control for demographic bias in the way the psychiatrists diagnosis patients by blinding them to person's SES, as well as the issues of validity in making psychiatric classifications based on evalutive reports, i.e. standardized questionnaires.

Srole et al. concluded that patients from the lower classes were more likely to be treated in public hospitals and clinics and that as one descended down the socioeconomic ladder one was less likely to be treated in a private hospital or clinic. They found the highest rates of treatment for mental illness in the higher classes in contrast to the

results of Hollingshead and Redlich. The overall prevalence of mental morbidity was shown to be inversely related to the adult patients' SES as well as with parental SES. Together these data suggest different rates of use of psychiatric services by the various classes not necessarily related to rates of psychiatric disorder.

Robins et al. (1984) in the Epidemiologic Catchment Area (ECA) study reported that the lifetime prevalence of schizophrenia was greater in the inner city than in the surburbs. Six month prevalence studies of psychiatric disorders demonstrated no difference in rates of schizophrenia in three ECA sites (Myers et. al., 1984). Both of these studies are community surveys of mental illness.

Other explanations have attempted to interpret the recipocral relationship between social class and rates of mental illness including studies by Brenner (1973 and 1967) and Malzberg(1940). Brenner (1973) suggested that different rates of psychiatric hospitalizations may be related to fluctuations in the economy. He demonstrated that between 1914 and 1971 the rates of admissions to public and private hospitals were inversely related to the economy and index of employment. Brenner hypothesized that in very difficult economic times, i.e. depressions and recessions, the economic fallout in terms of unemployment and lost purchasing power are most greatly experienced by those in the lower socioeconomic classes because of the predominance of lower skilled workers. This may result in higher rates of mental

hospitalization for these classes. These higher rates in the lower classes may be due to either the economic stress resulting in increased psychopathology or decreased tolerance among family members resulting in increased hospitalization. Brenner also suggested that economic dislocation may be more responsible for a person's downward mobility than their mental incompetence resulting in downward mobility.

A central issue in evaluating all these studies is construct validity in diagnosis and the evolution of various diagnostic schemes for classifying schizophrenia over the years. For many years American psychiatrists used a broader definition of schizophrenia based on Bleuler's description in the 1950's (Tischler et al,1987). The broad scope in the definition of schizophrenia was recognized in a study by Wing (1970) comparing diagnostic patterns between American and British psychiatrists that indicated that British psychiatrists had a much narrower definition of schizophrenia and that many patients that American psychiatrists had diagnosed as schizophrenic were diagnosed as manic depressive by the British psychiatrists. This overly broad definition was further substantiated by the WHO pilot study (1974) investigating rates of schizophrenia in various countries that determined that both American and Russian psychiatrists used very broad definitions.

DSM, Diagnostic and Statistical Manual of Mental Disorders first published in the 1950's, has responded to some of the changes in the clinical practice of psychiatry

and has been revised accordingly over the years. In the 1970's, the definition and criteria required to make a diagnosis of schizophrenia narrowed (Tischler et al.,1987). Difficulties may arise when comparing the previous studies because it is not always clear which criteria were used to diagnosis a patient with schizophrenia in the past and whether the same patient would receive that diagnosis today.

In 1980 in an effort to further standardize diagnoses in psychiatry to improve the interrater reliability in diagnosis, DSM-III was published. Many of the criteria for schizophrenia in DSM-III were derived from a diagnostic scheme developed at Washington University by Feigner et al. (1972)(Tischler et al.,1987). Tischler et al. (1987) described five areas of controversy in the criteria for schizophrenia in DSM-III, they include: "(1) the duration of criterion, (2) the characteristic symptoms, (3) the age criterion, (4) the organic exclusion criterion, (5) the validity of subtypes."(p.104). Schizophrenia is described in DSM-III as a disease primarily of delusions and hallucinations of at least six months duration, that occurs primarily in those under 45 who do not have clearly identifiable organic pathology to explain their symptoms. Tischler et al. suggests that the age criterion has not been proven by epidemiologic studies and is derived from earlier conceptions of the illness by Kraepelin who felt it was a disease affecting young people. Delusions and hallucinations are thought to have been given undue prominence in making a

diagnosis of schizophrenia and may not be more reliable than other symptoms based on current evidence (Tischler et el,1987). The duration of symptoms criteria are based on a study by Coryell and Tsuang (1982) comparing various psychotic disorders by duration of illness as a predictor of outcome. These study results however may not necessarily be generalized to current cases (Tischler et al. 1987).

Reliabilty is discussed by Tischler et al.(1987) with regards to DSM-III. They asked several relevant questions about the symptoms used in diagnostic criteria: "Are they common enough in the patients so that the diagnosis can be made accurately? Are they specific to a given disorder, or do they occur in many different disorders?"(p.104). Nonpersecutory or jealous delusions is the only DSM-III criteria for schizophrenia which proved to be reliable. Tischler et al.(1987) accurately described some of the problems with statistical classifications:

> " The International Classification of Diseases and any of the DSMs, including DSM-III, are statistical classifications...Coverage and reliability of categories diminishing as coverage increases. The necessity for complete coverage and the requirement that the system be used by everyone (compliance) are the principal features that distinguish statisical classification from research nosology." (p.436)

This distinction is an important one because in the process of developing statistical classification systems in order to achieve agreement and compliance for complete coverage, it is essential that criteria are ultimately tested for reliability and usability before they become part of official nosology (Tischler et al,1987).

In light of the controversy over the years in defining what constitutes schizophrenia, it is interesting to note that very rarely is information provided nor the criteria given on which the diagnoses are based in many of the previous studies. Dohrenwend and Dohrenwend (1969) state "The validity of the results is assumed to be implicit in the diagnostic process, a shaky process in light of World War II experience with psychiatric screening" (p.99).

Most of the previous studies that have looked at treated rates of mental illness in relation to social class have assumed that the diagnosis from the medical records was valid (Dohrenwend & Dohrenwend, 1969) or made reclassifications based on information provided in the medical record (perhaps of questionable reliability) without reinterviewing patients. None of these studies has systematically looked at the discepancies in diagnostic process, that have resulted in the patients ultimately being diagnosed as schizophrenic who may not have been initially diagnosed with schizophrenia on admission.

The broader issue of whether patients presenting with a similiar past psychiatric history receive similiar admission diagnoses when they are first evaluated in a private versus a public hospital (that they have never been previously admitted to) has not been addressed by these studies. It is hoped that studying the diagnostic process may provide further information useful in evaluating studies of treated cases of mental illness particularly with regards to social

class since diagnostic decisions and criteria are not made in a vacuum but reflect the values at large.

METHODS:

The inclusion criteria for this study are as follows: Patients were selected who had been admitted to one of two University affiliated teaching hospitals, one private and the other public hospital in New Haven between June 1980 and June 1989. The first admission for each patient in which they received a discharge diagnosis of schizophrenia from either hospital was selected. Patients had to be less than 36 years of age at the time of the selected admission in order to be included.

The exclusion criteria for this study are as follows: Patients were excluded if they had previously received a discharge diagnosis of schizophrenia prior to June 1980 or after June 1989 at either hospital.

A questionnaire was created by the author to gather data about the patient and the selected hospital admission from their medical records. The questionnaire addresses demographics. Age, sex, race, religion, education, admission diagnosis for the selected first admission, provisional diagnosis for the selected admission, number of previous psychiatric hospitalizations,length of time of selected admission, previous psychiatric diagnoses, admission diagnosis the very first time schizophrenia was diagnosed in the patient, family history of schizophrenia or other psychiatric illness,as well as symptoms recorded in medical record at the time of the selected admission were included

in the questionnaire. Please see questionnaire for further information.

Medical records helped generate a lists of patients that met the study criteria at each hospital and their charts were evaluated with the use of the above designed questionnnaire. Of the patients that met study criteria 44 were not included from the public hospital and 16 were not included from the private hospital because their charts were not located or were in an outpatient clinic and were not accessible. All identities of patients were kept confidential and no information in this printed study reveals their identities. The Human Investigations Committee granted permission for access to the patients' file if confidentiality would be ensured.

Systat was used as the statistical computer package to analysis the results of the data by 2 X 2 contigency tables to test for statistical significance.

RESULTS:

The total number of cases included in this study was 155, 89 were from the public hospital and 66 were patients admitted to the private hospital. The demographic information for the two groups is provided in Table 1-10.

Table 1: Place of hospitalization * Sex

	female	male
private	23 (35%)	43 (65%)
public	29 (33%)	60 (67%)

In table 1, place of hospitalization is recorded in relation to sex, in the private and public hospital respectively women represent 35% and 33% of the sample with men comprising the remaining 65% and 67% respectively.

Table 2: Place of hospitalization *Race

	White	Black	Asian	Hispanic	Other
Private	59 (89%)	3 (4%)	2 (3%)	0 (0%)	2 (3 %)
Public	46 (52%)	39 (44%)	0 (0%)	3 (3%)	1 (1%)

In table 2., place of hospitalization is compared with race, the private hospital is predominately white with 89% of

its patients classified as white, where as the public hospital is composed of a more ethnically mixed population 52% of patients are white and 44% are black.

Table 3: Place of hospitalization * Religion:

	Protestant	Catholic	Jewish	Islamic	Buddhist	Other	Missing values
Private	16 (24%)	30 (45%)	8 (12%)	0 (0%)	0 (0%)	1 (1%)	11 (16%)
Public	39 (44%)	28 (32%)	0 (0%)	1 (1%)	0 (0%)	9 (10%0	12 (13%)

In table 3, when religion is compared in the two hospitals, 24% of private patients and 44% of public patients are protestants, while 45% of private patients and 32% of public patients are catholics.. 12% of the patients in the private hospital are jewish but none at the public hospital are jewish.

Table 4: Place of hospitalization * marital status

	Single	married	divorced	widowed
Private	64 (97%)	0 (0%)	2 (3%)	0 (0%)
Public	70 (79%)	8 (9%)	7 (8%)	4 (4%)

In table 4, in both the private and public hospital patients are predominately single, 94% and 79% respectively. However, more patients are married(9%) or divorced(8%) at the public hospital when compared with the patients at the private hospital, none are married and 3% are divorced.

Table 5: Place of hospitalization * Education

	<high school	high school graduate	Some college	college graduate	graduate school	missing values
Private	22 (33%)	24(36%)	15 (23%)	1(2%)	3(5%)	1 (2%)
Public	38(43%)	24(27%)	21(24%)	3(3%)	1(1%)	2(2%)

Patterns of educational achievement are similiar among the patients from the private and public hospitals. There is a slight difference with 5% of private patients as compared to 1% of public patients having gradute school education. 69% compared to 70% of private and public hospital patients respectively are high school graduates or less. Among public and private patients, 27% and 25% respectively have some college education.

In tables 6-7, data is provided on the average age on admission as well as the average age the patient was first diagnosed with schizophrenia, the average length of this hospitalization, the average number of previous diagnoses and average number of hospitalizations. Table 6 is data from the private patients and table 7 is data from public patients.

Table 6: Mean variables for private hospital patients.

Total #of cases	66	65	62	66	66
Private hospital	age On admission	age first diagnosed	length of hospitalization - months	number of previous diagnoses	number of previous hospitalizations
Minimum	14.0	13.0	0.1	0.0	0.0
Maximim	33.0	32.0	36.0	9.0	16.0
mean	22.2	20.3	6.2	1.8	4.3
SEM*	0.5	0.5	0.8	0.2	0.4

***SEM=Standard error of the mean.**

Table 7.: Mean variables for public hospital patients.

Total #cases	89	82	74	84	84
Public hospital	Age on admission	Age first diagnosed	length of hospitalization (months)	number of previous diagnoses	number of previous hospitalizations
Minimum	18.0	11.0	0.1	0.0	0.0
Maximum	35.0	35.0	18.0	11.0	24.0
Mean	25.7	22.4	1.8	1.8	3.9
SEM	0.5	0.5	0.3	0.2	0.5

The average age on admission is 3.5 years older at the public hospital when compared with the private hospital, 25.7(0.5) years and 20.3(0.5)years, respectively. The average age of first diagnosis of schizophrenia is slightly higher in public patients at 22.4(0.5)years as compared to 20.3(0.5) years among private patients. Of note is the unofficial policy of the private hospital to focus on yoounger patients and the public hospital not to admit patients under the age of 18. The average length of this hospitalization is 6.2(0.8) months at the private hospital compared to 1.8(0.3) months at the public hospital. The average number of previous diagnoses prior to this hospitalization was the same at both the private and public hospital at 1.8 (0.2). The public and private patients had similiar numbers of previous hospitalizations 4.3(0.4) at the private hospital and 3.9(0.5) at the public hospital.

Tables 8-9 are similiar to tables 6-7 but instead of being divided into public and private hospital as separate tables they are divided into newly diagnosed(this admission) and previously diagnosed (prior to this hospitalization) tables.

Table 8: Mean variables for newly diagnosed patients.

First diagnosed on this admission	Age on admission	Length of hospitalization in months	Number of previous diagnoses	Number of previous hospitalizations
Total # cases	55	55	55	54
Minimum	14.0	0.1	0.0	0.0
Maximum	35.0	21.0	11.0	10.0
Mean(SEM)	23.8(0.7)	4.1(0.7)	2.0(0.3)	1.9(0.3)

Table 9: Mean variables for previouly diagnosed patients.

	Age on admission	Age first diagnosed	Length of hospitalization in months	Number of previous hospitalizations	Number of previous diagnosis
Total #cases	98	90	80	95	93
Minimum	15.0	11.0	0.1	1.0	0.0
maximum	34.0	31.0	36.0	24.0	9.0
Mean	24.4	20.3	3.6	5.2	1.7
SEM	0.4	0.4	0.6	0.4	0.2

Compared with patients who have previously been diagnosed with schizophrenia the average age on admission of newly diagnosed patients only differs by 0.6 years. It was 23.8(0.7)years among newly diagnosed patients and

24.4(0.4)years among those previously diagnosed. The average age at first diagnosis of schizophrenia is 23.8(0.7) years among the newly diagnosed and 20.3(0.4)years among previously diagnosed. The average length of this hospitalization is comparable among the newly diagnosed and previously diagnosed schizophrenic, 4.1(0.7) and 3.6 (0.6) months respectively. The newly and previously diagnosed schizophrenic had a similiar number of previous diagnoses 2.0(0.3) and 1.7(0.2) respectively. The average number of previous hospitalizations prior to this admission was 5.2(0.4) among the previously diagnosed and 1.9(0.3) among the newly diagnosed.

Table 10 clearly demonstrates the diagnosis that newly diagnosed patients receive on admission. In the public hospital, 74% of the newly diagnosed patients received an admission diagnosis of schizophrenia, 8% received a diagnosis of schizophreniform disorder, and 3% receives schizoaffective disorder as their admission diagnosis, with the rest of the patients, 15% receiving other psychiatric diagnosis. In the private hospital, 35% of the newly diagnosed patients received a diagnosis of schizophrenia, 12% received a diagnosis of schizophreniform disorder and the rest, 53%, of the patients were diagnosed as follows: 18% atypical psychosis, 18% depressive disorder, 6% bipolar disorder, 6% other personality disorder and %6 organic brain syndrome.

Table 10 Place of Hospitalization by Admission Diagnosis for Newly Diagnosed Patients.

	Schizophrenia	Schizophreniform	Schizoaffective	Atypical Psychosis	Bipolar Disorder
Private Hospital	6 (35%)	2 (12%)	0 (0%)	3 (18%)	1 (6%)
Public Hospital	28 (74%)	3 (8%)	1 (3%)	5 (13%)	0 (0%)

Table 10: Place of Hospitalization by Admission Diagnosis for Newly Diagnosed. (cont'd.)

	Depressive Disorder	Other Personality Disorder	Organic Brain Syndrome	Other diagnosis
Private Hospital	3 (18%)	1 (6%)	1 (6%)	0 (0%)
Public Hospital	0 (0%)	0 (0%)	0 (0%)	1 (3%)

Tables 11-26 present data indicating the relationship between place of hospitalization (public or private hospital) and the diagnosis on admission controlling for a new or previous diagnosis of schizophrenia, age on admission, age when first diagnosed with schizophrenia, sex, race, number of previous diagnoses, length of this hospitalization and number of previous hospitalization.

Admission diagnosis was collapsed into two categories, schizophrenia and not schizophrenia, to enhance the

statistical power in the following tables 11-26. The schizophrenia category includes schizophrenia, schizophreniform and schizoaffective and the not schizophrenia category includes other psychotic disorders, bipolar disorder, depression, personality disorder, organic brain syndrome or other disorders.

Table 11: Place of hospitalization*Admission diagnosis*Newly diagnosed.

	Schizophrenia	Not Schizophrenia
Private hospital	8 (47%)	9 (53%)
Public hospital	32 (84%)	6 (16%)

Table 12: Place of hospitalization*admission diagnosis*Previously diagnosed

	Schizophrenia	Not schizophrenia
Private hospital	41 (84%)	8 (16%)
Public hospital	42 (86%)	7 (14%)

Df=2, $x^{2}=7.47$, p=0.024*
*P<.025

In tables 11-12,patients who have never previously been diagnosed with schizophrenia have a 1.8 times greater likelihood of receiving an admission diagnosis of schizophrenia at the public hospital when compared to the private hospital, 84% and 47% respectively.

47% of newly diagnosed private patients received a diagnosis of schizophrenia on admission the remaining patients,53%, received a diagnosis other than schizophrenia on admission. 84% of newly diagnosed public patients received a diagnosis of schizophrenia on admission and 16% received a diagnosis other than schizophrenia.

For patients with a previous diagnosis of schizophrenia prior to this admission the patterns of admission diagnosis are similiar between the public and private hospitals 86% and

84% respectively receive an admission diagnosis of schizophrenia.

Age was subdivided into two categories, those 18 years and under and those over 18 years old. This was done to increase the statistical significance of tables 13-14.

Table 13: Place of hospitalization*Admission Diagnosis*Age on Admission (<20 years)

	Schizophrenia	Not schizophrenia
Private Hospital	18 (69%)	8 (31%)
Public Hospital	7 (70%)	3 (30%%)

Table 14: Place of hospitalization*Admission diagnosis*Age on admission(>20 years)

	Schizophrenia	Not Schizophrenia
Private Hospital	31 (78%)	9 (22%)
Public Hospital	69 (87%)	11 (13%)

Df=2, $X^{2=3.17}$, p=.205

Among those 20 years and younger 69% and 70% of private and public patients, respectively, were diagnosed with schizophrenia on admission. For those over 18 years, 78% and 87% of patients respectively were diagnosed with schizophrenia on admission.

Tables 15-16, control for the age at which the patient was first diagnosed with schizophrenia as an indirect measure of chronicity in relation to the patient's diagnosis on

admission. Age is subdivided into those 20 years and under and those over 20 years

For those 20 years and under, comparable percentages,81% and 75% of private and public patients respectively are diagnosed on admission. For those over 20 years the percentages are 72% and 87% of the private and public patients are diagnosed with schizophrenia on admission.

Table 15: Place of hospitalization*Admission diagnosis*Age First Diagnosed Schizophrenic (=<20 years)

	Schizophrenia	Not Schizophrenia
Private Hospital	31 (75%)	10 (25%)
Public Hospital	29 (81%)	6 (19%)

Table 16: Place of hospitalization*Admission diagnosis*Age first diagnosed Schizophrenic (>20 years)

	Schizophrenia	Not Schizophrenia
Private Hospital	18 (72%)	7 (28%)
Public Hospital	47 (87%)	8 (13%)

DF=2, X^2=.45, p=.799

The relationship between place of hospitalization and admission diagnosis controlling for sex, tables 17-18, indicates that among females, 65% of the private patients and 83% of the public patients received an admission diagnosis of schizophrenia. Among male patients , 79% of private patients and 87% of public patients received an admission diagnosis of schizophrenia.

Table 17: Place of hospitalization*Admission diagnosis*Sex (Female)

	Schizophrenia	Not Schizophrenia
Private Hospital	15 (65%)	8 (35%)
Public Hospital	24 (83%)	5 (17%)

Table 18: Place of Hospitalization*Admission diagnosis*Sex (Male)

	Schizophrenia	Not Schizophrenia
Private Hospital	34 (79%)	9 (21%)
Public Hospital	52 (87%)	8 (13%)

df=2, X^2=.21 p=0.900

The relationship between the place of hospitalization and admission diagnosis controlling for race, tables 19-20, indicates that among whites there are comparable percentages of public and private patients that receive an admission diagnosis of schizophrenia, 76% and 89% respectively. Among nonwhites 57% of private patients and 83% of public patients receive an admission diagnosis of schizophrenia.
Race has been subdivided into white and nonwhite to increase the statistical significance of tables 19-20.

Table 19. Admission Diagnosis by Place of hospitalization by Race (White)

	Schizophrenia	Not Schizophrenia
Private Hospital	45 (76%)	15 (24%)
Public Hospital	41 (89%)	5 (11%)

Table 20: Place of hospitalization*Admission diagnosis*Race (Nonwhite)

	Schizophrenia	Not Schizophrenia
Private Hospital	4 (57%)	3 (43%)
Public Hospital	33 (83%)	7 (17%)

Df=2, $X^{2}=5.19$ p=.075

The number of previous diagnoses is recoded into two categories in tables 21-22, no previous psychiatric diagnosis and one or more previous diagnoses. 78% and 91% of the private and public patients respectively received an admission diagnosis of schizophrenia among those without a previous psychiatric diagnosis. Among those with one or more previous diagnoses, 73% of the private patients and 85% of the public patients received an admission diagnosis of schizophrenia.

Table 21: Place of hospitalization*Admission diagnosis*Number of previous diagnoses(=0)

	Schizophrenia	Not Schizophrenia
Private Hospital	14 (78%)	4 (22%)
Public Hospital	21 (91%)	2 (9%)

Table 22: Place of hospitalization*Admission diagnosis*Number of previous diagnoses(=>1)

	Schizophrenia	Not Schizophrenia
Private Hospital	35 (73%)	13 (27%)
Public Hospital	52 (85%)	9 (15%)

Df=2, X^{2}=.07,p=.966 (statistic is suspect cell with <5)

Tables 23-24 show the recoded variable education (high school graduate or less and some college or more) in two categories by place of hospitalization by admission diagnosis. These tables show that among public and private patients who are high school graduates or less, 83% and 64% respectively receive an admission diagnosis of schizophrenia. Among the public and private patients that have some college education or more 95% and 59% respectively received an admission diagnosis of schizophrenia.

Table 23: Place of hospitalization*Admission diagnosis*Education (High school graduate or less)

	Schizophrenia	Not Schizophrenia
Private Hospital	25 (64%)	14 (36%)
Public Hospital	51 (83%)	11 (17%)

Table 24: Place of hospitalization*Admission diagnosis*Education (Some college or more)

	Schizophrenia	Not Schizophrenia
Private Hospital	10 (59%)	7 (41%)
Public Hospital	21 .(95%)	1 (5%)

Df=2, X^{2}=2.18, p=0.337

The number of previous hospitalizations was recoded into two categories in tables 25-26, no previous hospitalization and one or more hospitalization. For those never previously hospitalized for psychiatric illness, 86% of the public patients as compared with 42% of the private patients received an admission diagnosis of schizophrenia on admission. Among those with a history of a previous psychiatric hospitalization, both private and public patient had comparable rates of diagnosis for schizophrenia on admission, 81% and 84% respectively.

Table 25: Place of hospitalization*Admission diagnosis*number of previous hospitalizations (=0)

	Schizophrenia	Not Schizophrenia
Private Hospital	5 (42%)	7 (58%)
Public Hospital	24 (86%)	4 (14%)

Table 26.: Place of hospitalization*Admission diagnosis*Number of previous hospitalizations (=>1)

	Schizophrenia	Not Schizophrenia
Private Hospital	44 (81%)	10 (19%)
Public Hospital	47 (84%)	9 (16%)

Df=2, X^2=8.74, p=.013*
*p<.025

SUMMARY OF RESULTS:

In tables 11-26 , a significant pattern has emerged in the way patients are diagnosed in a public and private

hospital on admission eventhough they all receive a discharge diagnosis of schizophrenia. Two salient trends have been demonstrated by the data, namely the power of a previous diagnosis of schizophrenia and the place of hospitalization in relation to newly diagnosed cases. The power of previous diagnosis of schizophrenia results in 84% of the public patients and 86% of the private patients receiving a diagnosis of schizophrenia (table 12) even when one controls for age on admission, sex , age when first diagnosed with schizophrenia, race, number of previous hospitalizations, and number of previous psychiatric diagnoses (other than schizophrenia).

It has also been shown by the above data that among newly diagnosed patients the place of hospitalization(public or private hospital) may be important in whether they are diagnosed with schizophrenia on admission and, if not diagnosed with schizophrenia, what other admission diagnosis they receive. For newly diagnosed patients 47% of the private patients compared to 84% of the public patient received an admission diagnosis of schizophrenia (table 11). There was also a statistcally significant difference in admission diagnosis between public and private hospitals when controlling for the number of previous hospitalizations. Among those without previous hospitalizations,42% of private patients were diagnosed on admission with schizophrenia while 86% of public patients received that diagnosis,(table 24). Among patients with one or more previous psychiatric

hospitalizations comparable percentages of patients at the private and public hospital were diagnosed with schizophrenia on admission, 81% and 84% respectively. This highlights the importance of past psychiatric history (number of previous hospitalizations and previous diagnosis of schizophrenia) in influencing admission diagnosis.

This data suggests that there is statistically significant difference in the way the newly diagnosed patients are diagnosed for schizophrenia on admission between the selected public and private hospital. Public patients are more likely, 1.8 times, to receive an admission diagnosis of schizophrenia as compared with private patients among patients who have never been diagnosed with schizophrenia nor hospitalized prior to this admission (Tables 1 and 24). This relationship is true even when one controls for age, sex,race,education, or number of previous psychiatric diagnoses. The trend also is evident in the tables in the appendix that represent the admission diagnosis the first time the patient was diagnosed with schizophrenia compared with place of hospitalization (public or private hospitals,not necessarily the selected hospitals) controlling for age at diagnosis, sex,race,and education.

DISCUSSION:

Why are newly diagnosed patients at a public hospital more likely to be diagnosed with schizophrenia on admission than are patients at the private hospital although they may present with similiar past psychiatric history (number of previous diagnoses and previous hospitalizations)? This is an important issue not only in terms of understanding what sociocultural factors may influence the ways in which patients are diagnosed but in providing information that may be helpful in interpretating the previous studies that have investigated the relationship between social class and treated cases of mental illness.

In this study, patients in the public hospital are thought to correspond to Hollingshead and Redlich's(1958) classes IV and V, and the private patients are thought to correspond to classes I-III. The relationship between social class and source of psychiatric treatment, public versus private, has been suggested quite convincingly by Hollingshead and Redlich as well as Srole et al (1962). It has been suggested that as the social class ladder is descended more patients are treated in public facilities as well as the observation that more patients in public hospitals come from the lower social classes (Hollingshead and Redlich 1958 and Srole et al.,1962)

If social class is used as one way of explaining the difference in the way patients are newly diagnosed for

schizophrenia on admission the above question can be rephrased as 'why are patients in the lower social classes more likely to receive an admission diagnosis of schizophrenia as compared with patients from the higher social classes?'

It is often difficult in retrospective studies to establish clear causation between an observation and the various contributing factors and this study is no exception. The results of this study suggest that among newly diagnosed private patients are more likely to be underdiagnosed on admission when compared with newly diagnosed public patients. A limitation of this retrospective study is the inability to demonstrate direct causation between the observed discrepancy in diagnosis. However, it is useful to return to the previous studies of social class and mental illness to shed some light on the intepretation of this pattern of underdiagnosis among newly diagnosed private
patients in this study.

Hollingshead and Redlich (1958) reported greater rates of mental illness in general and of schizophrenia in particular among the lower social classes. The difference in patterns of admission diagnosis among the newly diagnosed could be explained on the basis that the results of Hollingshead and Redlich are true, in fact there are greater rates of mental illness among the lower classes. One might expect that psychiatrists who practice in public hospitals are more sensitive to diagnosing schizophrenia because they

work with a population that is at higher risk for developing the disease and therefore encounter more cases in their practice. An analogy to this would be in comparing the rates of diagnosis of malaria in Western Africa among indigenous physicians where it is endemic with U.S. physicians diagnosing malaria among their patients here. The indigenous physicians in Western Africa would most likely have a greater sensitivity to the diagnosis of malaria. Does increased sensitivity to the diagnosis of schizophrenia among public hospital psychiatrists seem a convincing explanation in our study sample? Although this is a plausible explanation it seems unlikely that in the particular institutions selected that this is true. The selected hospitals are both affilitated with the same university teaching system which would not select for more or less qualified psychiatrists in one hospital versus the other.

Another plausible explanation for this difference in diagnostic patterns may be the result of class related bias in the ways patients are diagnosed in a public psychiatic hospital as compared to a private psychiatric hospital. Studies that indirectly support this hypothesis are Pasamanick et al.(1959), Gross et al.(1969), and Lipton and Simon (1985).

Pasamanick et al. (1959) analyzed the relationship between discharge diagnosis and the psychiatric ward among 538 female first admissions between 1956 and 1957. There were three psychiatric wards that patients were assigned to

in one institution. This study concluded that there were significant differences in the diagnosis a patient received that was dependent on the ward assignment. The same patient received a different diagnosis on a different ward. It was reasoned in this paper that a psychiatrist may be so committed to a particular school of thought that a patient's diagnosis and treatment are largely predetermined:

> "clinicians, as indicated by these data, may be selectively perceiving and emphasizing only those characteristics and attributes of their patients which are relevant to their own preconcieved system of thought."(Pasamanick et al.,1959, p.131)

The diagnosis and what influences these diagnostic decisions are important not only in terms of treatment but also in terms of better understanding of the etiology of these disorders (Pasamanick et al., 1959).

Lipton and Simon (1985) suggested in their study that there was a predilection of New York hospitals to overdiagnose schizophrenia and to underdiagnose affective disorders. The study involved 131 randomly selected patients charts,from Manhattan Psychiatric Center, for evaluation of chart diagnosis in comparison to DSM-III criteria for the disorder. Manhattan Psychiatric Center is a state facility. They found that the ratio of schizophrenia to affective disorder was reversed by rediagnosis using DSM-III criteria. It was also reported in this study that vague phrases and criteria were used to diagnosis the patients.

> "These phrases, vague at best, erased all traces of meaning when the beholder is influenced by profound cultural and socioeconomic

differences, language barriers, and a patient who has already been subjected to a police experience, city hospitals and significant doses of major tranquilizers."(Lipton and Simon,1985 p.370)

They also noted that once a patient was diagnosed with schizophrenia for the most part this diagnosis were never reconsidered, emphasizing again the importance of first diagnosis. Limitations of their study include the fact that psychiatrists making the reassigned diagnosis were not blinded to the original chart diagnosis.

Pulver et al.(1988) argued in their study investigating hospital diagnosis for affectve disorders and schizophrenia for patients admitted to public hospitals in Maryland that Lipton and Simon's claim of overdiagnosis of schizophrenia and underdiagnosis of affective disorders could not be supported by their study results.

Pulver et al. studied 137 patients hospital charts, reinterviewed patients for further clarification, patients were rediagnosed using a modified NIMH Diagnostic Interview Schedule and Best-Estmate Research Diagnosis was made. The Best-Estimate Research Diagnosis was compared with the chart discharge diagnosis. It was found that sensitivity and specificity for a discharge diagnosis was 0.61 and 0.94, respectively. Overall, they reported that the hospital discharge diagnosis of schizophrenia was confirmed in 77% of the cases.

Hollingshead and Redlich discussed quite extensively the gulf which may exist between psychiatrist and his patients in terms of class, ethnicity, sex, education, and religion. Differences between psychiatrist and patient in terms of class were clearly shown to influence the kind of treatment patients received for the same diagnosis, with patients from the lower classes receiving more organic treatments while those from the higher socioeconmic classes received more psycotherapy. If treatment is influenced by class might it not be that diagnostic decisions are also influenced by class?

The study results clearly show that private psychiatrists underestimate the diagnosis of schizophrenia on admission when compared to public psychiatrists. The most plausible explanation for this discrepancy is that private psychiatrists are more reluctant to give their patients a diagnosis of schizophrenia on admission because of the treatment implications as well as the prognosis. Private psychiatrists spend more time evaluating a patient before rendering a diagnosis of schizophrenia (exhausting other diagnostic categories first). The implication of this study for interpreting rates of treated schizophrenia in relation to social class is that perhaps rates have been underestimated among higher social classes.

CONCLUSIONS:

A major limitation of this study is that only inpatients are investigated in terms of evaluating the diagnostic process. This study also assumes to a certain degree that the diagnosis of schizophrenia is valid on discharge (which may not be the case, yet is part of the study's inclusion criteria) in an attempt to study as homogeneous a patient population as possible. Another major limitation of this study is the use of chart review because there is only so much information that a chart can provide the reader about a psychiatric patient and it is through the eyes of the recorder.

The relationship between schizophrenia and social class is an intriguing one. Although many studies have reported an inverse relationship between rates of schizophrenia and social class, these diagnoses were made in the context of the class structure of the society, a class structure in which psychiatrists are members of the higher social classes. This study has clearly suggested that the relationship between social class and increased rates of schizophrenia may partially be an artifact of class related bias in psychiatric care and diagnosis among the newly diagnosed. Further studies are needed to investigate this relationship between social class and mental illness as well as social distance and psychiatric diagnosis.

APPENDIX:

Table 27.Symptom profile on admission for all patients. Both public and private hospitals.

SYMPTOMS	Public Hospital	Private Hospital
Paranoid Delusions	57.3%	60.0%
Depressive	43.8%	84.9%
Impaired Function	60.7%	75.8%
Auditory Hallucinations	56.2%	65.2%
Loose Associations	40.5%	40.9%
Disturbed Affect	69.7%	89.4%
Disturbed Mood	19.1%	60.6%
Social withdrawal	41.6%	78.6%
Anger	32.6%	74.2%
Bizarre Delusions	34.8%	31.8%
Anxiety	33.7%	83.3%
Grossly disorganized	42.7%	33.3%
Grandiose Delusions	22.5%	37.8%
Suspicious	29.2%	77.3%
Incoherence	15.7%	34.8%
Alcohol Abuse	21.4%	25.8%
Substance Abuse	23.6%	31.8%
Suicidal	19.1%	48.5%
Visual Hallucinations	19.1%	24.4%
Assaultive	15.7%	31.8%
Low self esteem	14.6%	72.7%
Antisocial	14.6%	19.7%
Religious Delusion	13.5%	15.4%
Somatic delusions	12.4%	10.8%
Somatic Complaints	5.6%	50.0%
Thought Blocking	12.4%	15.2%
Dependency	13.5%	72.7%
Illogical thinking	10.1%	19.7%

Poverty Speech	9.0%	16.7%
Impulsive	9.0%	12.1%
Obessive	7.9%	57.6%
Homicidal	7.9%	4.6%
Flight of Ideas	5.6%	1.5%
Distractibility	3.4%	4.6%
Other Delusions	5.6%	4.6%
Lack of Initiative	63.6%	1.1%
Disturbances in Sleep	1.1%	1.5%
Neologisms	1.1%	7.6%
Excessive Pleasure	0.0%	1.5%
Exaggerated Sensitivity	0.0%	69.7%
Catatonic	2.3%	6.1%
Jealous Delusions	O.0%	1.5%
Nihilistic Delusions	0.0%	0.0%

Table 28. Symptoms on Admission for Newly Diagnosed Patients at Public & Private Hospitals

Symptoms:	Public Hospital	Private Hospital
Disturbances in Affect	78.9%	100.0%
Impaired Function	71.1%	58.8%
Auditory Hallucination	52.6%	70.6%
Paranoid Delusions	65.8%	35.3%
Depressive	52.6%	70.6%
Loose Associations	42.1%	23.5%
Social Withdrawal	44.7%	88.2%
Anxiety	34.2%	76.5%
Grossly Disorganized	34.2%	29.4%
Alcohol Abuse	31.6%	29.4%
Grandiose Delusions	23.7%	41.2%
Suspicious	23.7%	64.7%
Anger	21.1%	76.5%
Substance Abuse	21.1%	41.2%
Dependency	18.4%	64.7%
Religious Delusions	15.8%	11.8%
Somatic Delusions	15.8%	17.7%
Somatic Complaints	5.3%	41.2%
Incoherence	13.2%	47.1%
Illogical Thinking	10.5%	29.4%
Low Self esteem	13.2%	58.8%
Sucidal	13.2%	41.2%
Homicidal	10.5%	0.0%
Antisocial	10.5%	11.8%
Assautive	13.2%	29.4%
Poverty of speech	7.9%	23.5%
Obsessive	7.9%	41.2%
Visual Hallucinations	7.9%	23.5%
Distractibility	5.3%	11.8%
Impulsive	5.3%	23.5%

Lack of Iniative	2.6%	29.4%
Sleep Disturbances	0.0%	0.0%
Other Delusions	0.0%	5.9%
Flight of Ideas	0.0%	0.0%
Exaggerated Sensitivity	0.0%	64.7%
Disturbances in Mood	15.8%	47.1%

Table 29. First Time Ever Admission Diagnosis by Public or Private Care During the hospitalization in which the patient was first diagnosed with schizophrenia on discharge.

	Schizophrenia	Not Schizophrenia
Public Hospital	35 (63%)	21 (37%)
Private Hospital	72 (86%)	12 (14%)

Df=1, X^2=10.05, p=.002*

*p<.005

Tables 30 First Time ever Admission Diagnosis by Public Hospital or Private Care During hospitalization in which the patient was first diagnosed with schizophrenia by Sex. This table is for male patients:

Place of Hospitalization	Schizophrenia	Not SChizophrenia
Public Hospital	10 (50.%)	10 (50%)
Private Care*	24 (86%)	4 (14%)

Table 31. This table is for females patients:

Place of Hospitalization	Schizophrenia	Not Schizophrenia
Public Hospital	25 (69%)	11(31%)
Private Care*	48 (85%)	8 (14%)

*=diagnosed at private hospital or by private psychiatrist.
Df=2, X^2=.79, p=.675

Tables 32 First Time Ever Admission Diagnosis By Public Hospital or Private Care. During hospitalization in which the patient was first diagnosed with schizophrenia by age on admission. This is age<=20 years

Place of Hospitalization	Schizophrenia	Not schizophrenia
Public Hospital	20 (61%)	13 (39%)
Private Care	30 (94%)	2 (6%)

Table 33: This is age>20 years

Place of Hospitalization	Schizophrenia	Not Schizophrenia
Public Hospital	15 (65%)	8 (35%)
Private Care*	42 (81%)	10 (19%)

Df=2, X^2=2.48, P=0.289

Tables 34:-35 First Ever Admission Diagnosis by Public Hospital or Private Care by Race. During the first hospitalization in which patient was diagnosed with schizophrenia. This table is white patients:

Place of Hospitalization	Schizophrenia	Not Schizophrenia
Public Hospital	40 (87%)	6 (13%)
Private Care*	31 (65%)	17 (35%)

Table 35. This table is nonwhites:

Place of Hospitalization	Schizophrenia	Not Schizophrenia
Public Hospital	29 (83%)	6 (17%)
Private Care*	4 (50%)	5 (50%)

Df=2, X^2=12.90, P=0.002

Tables 36-37. First Ever Admission Diagnosis by Public Hospital orPrivate Care by Duration of hospitalization. During the first hospitalization in which the patient was diagnosed with schizophrenia. This is duration of hospitalization=<6months:

Place of Hospitalization	Schizophrenia	Not Schizophrenia
Public Hospital	19 (68%)	9 (32%)
Private Care*	64 (86%)	10 (14%)

Table 37 This is duration of hospitalization >6 months:

Place of Hospitalization	Schizophrenia	Not Schizophrenia
Public Hospital	16 (57%)	12 (43%)
Private Care*	8 (80%)	2 (20%)

X^2=74.43,Df=4, P=0.000

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Sample questionnaire:

1. Assigned patient code no. _ _ _ _ _ _ _

2. Sex: Female=1, Male=2 _

3. Race: White=1, Black=2, Asian=3, Hispanic=4, Other=5 _

4. Religion: Protestant=1, Catholic=2, Jewish=3, Islamic=4, Buddhist=5, Other=6__

5. Age: _ _.

6. Patient's employment status/ income/class:

7. Patient's marital status: single=1, married=2, divorced=3, widowed=4 _

8. Patient's educational level: Less than High school=1, high school graduate=2, some college=3, college graduate=4, some graduate school=5 _

9. No. of psychiatric hospitalizations prior to this admission:__

10. Age first diagnosed as schizophrenic: _ _

11. Year first diagnosed with schizophrenia: _ _ _ _Other psychiatric disorders, please specify _ _ _ _ _

12. Year of this admission: _ _ _ _.

13. Was the patient first diagnosed with schizophrenia at this facility: yes=1, no=2 __

14. Is this a Private or Public Facility? Private=1, Public=2__

15. Admission diagnosis (axis I) during the period in which schizophrenia was first being considered: Schizophrenia=1, schizophreniform=2, schizoaffective disorder=3,

Delusional disorder=4, Atypical Pychosis=5, Brief reactive psychosis=6, Bipolar disorder=7, Borderline Personality disorder=8, Depressive disorder=9, Other Personality Disorder=10, Organic Brain Syndrome=11, Drug-induced pychosis=12, Other=13, Info. unavailable=14__.

16. Was there any other provisional admissions diagnosis (axis I) during the period in which schizophrenia was first being considered: Schizophrenia=1, schizophreniform=2, schizoaffective disorder=3, Delusional disorder=4, Atypical pychosis=5, Brief reactive psychosis=6, Bipolar disorder=7, Borderline Personality disorder=8, Depressive disorder=9, Other Personality Disorder=10, Organic Brain Syndrome=11, Drug-induced pychosis=12, Other =13, None=14, info unavailable=15__.

17. Discharge diagnosis (axis I) during the period in which schizophrenia was first being considered : Schizophrenia=1, schizophreniform=2, schizoaffective disorder=3, Delusional disorder=4, Atypical pychosis=5, Brief reactive psychosis=6, Bipolar disorder=7, Borderline Personality disorder=8, Depressive disorder=9, Other Personality Disorder=10, Organic Brain Syndrome=11, Drug-induced pychosis=12, Other =13, info unavailable=14__.

18. Elapsed time between suspected diagnosis of schizophrenia and a definitive diagnosis of schizophrenia: _____

19. Admission diagnosis (axis I) during the first admission to this facility when a diagnosis of schizophrenia is considered: Schizophrenia=1, schizophreniform=2, schizoaffective disorder=3, Delusional disorder=4, Atypical pychosis=5, Brief reactive psychosis=6, Bipolar disorder=7, Borderline Personality disorder=8, Depressive disorder=9, Other Personality Disorder=10, Organic Brain Syndrome=11, Drug-induced pychosis=12, Other =13__.

20. Was there any other provisional admission diagnosis (axis I) at the time of the first admission to this facility when a diagnosis of schizophrenia was considered: Schizophrenia=1, schizophreniform=2, schizoaffective disorder=3, Delusional disorder=4, Atypical pychosis=5, Brief reactive psychosis=6, Bipolar disorder=7, Borderline Personality disorder=8, Depressive disorder=9, Other Personality Disorder=10, Organic Brain Syndrome=11, Drug-induced pychosis=12, Other =13, None=14__.

21. Discharge diagnosis (axisI) during the first admission to this facility in which a diagnosis of schizophrenia was considered:Schizophrenia=1, schizophreniform=2, schizoaffective disorder=3, Delusional disorder=4, Atypical pychosis=5, Brief reactive psychosis=6, Bipolar disorder=7, Borderline Personality disorder=8, Depressive disorder=9, Other Personality Disorder=10, Organic Brain Syndrome=11, Drug-induced pychosis=12, Other =13__.

22. Was there any other provisional discharge diagnosis (axis I) during the first admission to this facility in which a diagnosis of schizophrenia was considered:Schizophrenia=1, schizophreniform=2, schizoaffective disorder=3, Delusional disorder=4, Atypical pychosis=5, Brief reactive psychosis=6, Bipolar disorder=7, Borderline Personality disorder=8, Depressive disorder=9, Other Personality Disorder=10, Organic Brain Syndrome=11, Drug-induced pychosis=12, Other =13, None=14__.

23. Prior to this admission what other psychiatric diagnosis has the patient received: schizophemiform=1, schizoaffective disorder=2, Delusional disorder=3, Atypical pychosis=4, Brief reactive psychosis=5, Bipolar disorder=6, Borderline Personality disorder=7, Depressive disorder=8,Other Personality Disorder=10, Organic Brain Syndrome=11, Drug-induced pychosis=12, Other =13, None=14__.

24. How many other psychiatric diagnoses did patient receive before being diagnosed as schizophrenic: __

25. Family history of schizophrenia: yes=1, No=2 _ Manic depression: yes=3, No=4 __ Other psychotic disorders yes=5, no=6.__

26. How many members of the family are/were schizophrenics: __

27. How many members of the family have/had Manic depression: __

28. In what sort of mental health facility was the patient first diagnosed as schizophrenic: Private=1, Public=2, private physician/mental health professional=3_

29. Who first diagnosed the patient as schizophrenic? PGY1=1,PGY2=2, PGY3=3,PGY4=4, Fellow=5, Attending physician=6 or other=7. __

30. Who first diagnosed the patient with any other major psychiatric disorder? no

other major psychiatric disorder=0, PGY1=1, PGY2=2, PGY3=3, PGY4=4, Fellow=5, Attending physician=6, other=7, Not aplicable=8 ___.

31. What symptoms did the patient exhibit in this admission: Duration of symtomatology (Acute vs., Chronic)? ____

(Not present=0,Present=1):

(1) bizarre delusions (Ideas of reference, thought broadcasting)__; (2) paranoid__, jealous__, somatic__, grandiose__,

religious__, nihilistic__, or other delusions__; (3) auditory hallucinations__, often

including a voice or voices maintaining a running commentary__; and (4)

incoherence__, marked loosening of associations__, poverty of speech__,

neologisisms__,__ markedly illogical thinking__, thought blocking __, disturbances

in mood__,inappropriate affect__,visual hallucinations__, and catatonic__ or grossly

disorganized behaviour__ (5) Depressed mood __, (6), obsessions,compulsions__ (7)

Somatic complaints __, (8) Social withdrawal/isolation___, (9) Low self-esteem__,

(10) Exaggerated interpersonal sensitivity__, (11) Dependency__, (12)

Suspicion,persecution___,(13)Suicidal thoughts__, (14) Homicidal thoughts__,(15)

Negativism, belligerence,and anger__, (16) Assaultive acts__, (17) Anxiety,

phobias__, (18) Alcohol abuse__, (19) substance abuse__, (20) Antisocial attitudes,

acts__, (21) Pressured Speech__, (22) Flight of Ideas__, (23) Distractibility__, (24)

Decreased need for sleep__,(25) Excessive involvement in pleasurable activities__,

(26) Impulsive__ (27) Agitated, Hyperactive__ (28) Lack of iniative, motivation__

(29) marked impairment of role functioning__. Any other symptoms, please specify _____.

32. Overall functioning of patient for month prior to this admission, GAS=_ _ (unavailable=00) _ _
Excellent__, Very good__, Good __, Fair__, Poor __, Very poor__ , Grossly impaired__, Unspecified__.

33. Did the diagnosis during this admission depend on response to drug treatments: yes=1, No=2 _

34. What treatments were used on this admission:
Antipsychotic drugs=1, Lithium=2, Antidepressants=3, Benzodiazepines=4, Ritalin=5, Beta-blockers=6, Other=7 ___

35. What treatments were prescribed at this discharge:
Antipsychotic drugs=1, Lithium=2, Antidepressants=3, Benzodiazepines=4, Ritalin=5, Beta-blockers=6, Other=7 ___

36. If an organic basis for the patient's behavior was suspected, was there a neurological evaluation? yes =1, no=2__, EEG__,normal__,abnormal__, CT Scan__normal__, abnormal__, Other__.

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